NC/QC/PD/2018-19/WF-C1 Date: 03-04-2018

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Development Of Water Fountain Civil Works At Proposed Mallasandra Park in Mallasandra Ward No.13 Shettyhalli Sub Division.}

Ref.: Material testing/QC/18-19,

Report Required for: Assistant Executive Engineer,
Project Division, Dasarahalli Zone,
BBMP, Bangalore.

Name of the Agency/Contractor*: Technical Manager, KRIDL.

PHYSICAL TESTS ON CEMENT

Brand : ZUARI
Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	**178 min**	Shall not be less than 30 min
2	Final setting time	**261 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**1.95 %**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**1.87 mm**	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results) b) 7 days (average of three results)	**28.91 N/Sq mm** **39.56 N/Sq mm**	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

Asst. Executive Engineer
Project Sub Division-I
Dasarahalli Zone,
Bruhat Bengaluru Mahanagara Palike

For Newzen Consultants Bangalore
Proprietor

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NC/QC/PD/2018-19/WF-PCC1

Date: 03-04-2018

1. TESTING OF COARSE AND FINE AGGREGATES:

Sub: Testing of Coarse and Fine aggregates to be used for bed concrete.
{Project*: Development Of Water Fountain Civil Works At Proposed Mallasandra Park in Mallasandra Ward No.13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Project Division, Dasarahalli Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Technical Manager, KRIDL.

1. COARSE AGGRGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	40 mm Sample	Single size	Graded
40mm	100.00	85-100	90 – 100
20mm	66.25	0 -20	30- 70
10mm	19.10	0 -5	10- 35
4.75mm	4.05	------	0- 5

2. FINE AGGREGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	96.20	90-100	90-100	90-100	The Sample Conforms to Grading Zone-II
02.36	82.35	60-95	75-100	85-100	
01.18	74.90	30-70	55-90	75-100	
600.mic	42.15	15-34	35-59	60-79	
300.mic	20.70	5-20	8-30	12-40	
150.mic	7.30	0-10	0-10	0-10	

Asst. Executive Engineer
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NC/QC/PD/2018-19/WF-C2 Date: 07-04-2018

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Development Of Water Fountain Civil Works At Proposed Mallasandra Park in Mallasandra Ward No.13 Shettyhalli Sub Division.}

Ref.: Material testing/QC/18-19,

Report Required for: Assistant Executive Engineer,
Project Division, Dasarahalli Zone,
BBMP, Bangalore.

Name of the Agency/Contractor*: Technical Manager, KRIDL.

PHYSICAL TESTS ON CEMENT

Brand : ZUARI
Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	165 min	Shall not be less than 30 min
2	Final setting time	287 min	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	1.79 %	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	2.14 mm	Shall not be more than 10 mm
5	Compressive strength c) 3 days (average of three results) d) 7 days (average of three results)	28.91 N/Sq mm 39.27 N/Sq mm	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

Page No. 1/1,

Asst. Executive Engineer
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For Newzen Consultants Bangalore
Proprietor

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NC/QC/PD/2018-19/WF-PCC2

Date: 07-04-2018

1. TESTING OF COARSE AND FINE AGGREGATES:

Sub: Testing of Coarse and Fine aggregates to be used for bed concrete.
{Project*: Development Of Water Fountain Civil Works At Proposed Mallasandra Park in Mallasandra Ward No.13 Shettyhalli Sub Division.}

Ref.: Material testing/QC/18-19,

Report Required for: Assistant Executive Engineer,
Project Division, Dasarahalli Zone,
BBMP, Bangalore.

Name of the Agency/Contractor*: Technical Manager, KRIDL.

1. COARSE AGGRGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2007) % Passing	
	40 mm Sample	Single size	Graded
40mm	**100.00**	85-100	90 – 100
20mm	**62.85**	0 -20	30- 70
10mm	**60.40**	0 -5	10- 35
4.75mm	**4.25**	------	0- 5

2. FINE AGGREGATES TABLE - SIEVE ANALYSIS:

IS Sieve Size, mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone -III	
04.75	**97.95**	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	**80.60**	60-95	75-100	85-100	
01.18	**74.20**	30-70	55-90	75-100	
600.mic	**43.80**	15-34	35-59	60-79	
300.mic	**16.25**	5-20	8-30	12-40	
150.mic	**7.45**	0-10	0-10	0-10	

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For Newzen Consultants Bangalore
Proprietor

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NC/QC/PD/2018-19/WF-C3

Date: 29-10-2018

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Development Of Water Fountain Civil Works At Proposed Mallasandra Park in Mallasandra Ward No.13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Project Division, Dasarahalli Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Technical Manager, KRIDL.

PHYSICAL TESTS ON CEMENT

Brand : ZUARI
Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	171 min	Shall not be less than 30 min
2	Final setting time	296 min	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	1.74 %	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	1.98 mm	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results) b) 7 days (average of three results)	28.32 N/Sq mm 39.79 N/Sq mm	Shall not be less than 27 N/Sqmm Shall not be less than 37N/Sqmm

Asst. Executive Engineer
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For Newzen Consultants Bangalore
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Date: 11-04-2018

NC/QC/PD/2018-19/WF-FA1

1. TESTING OF FINE AGGREGATES :

Sub: Testing of Fine Aggregates.
{Project*: Development Of Water Fountain Civil Works At Proposed Mallasandra Park in Mallasandra Ward No.13 Shettyhalli Sub Division.}

Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Project Division, Dasarahalli Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Technical Manager, KRIDL.

TABLE - 1.1 ; SIEVE ANALYSIS :

IS Sieve Size,mm	Percentage Passing	Specification as Per IS: 383-1970(Reaffirmed 2002) Percentage Passing			Remarks
		Zone-I	Zone-II	Zone –III	
04.75	**98.30**	90-100	90-100	90-100	The Sample Conforms to Grading **Zone-II**
02.36	**81.40**	60-95	75-100	85-100	
01.18	**76.35**	30-70	55-90	75-100	
600. mic	**49.75**	15.34	35-59	60-79	
300.mic	**21.90**	5-20	8-30	12-40	
150.mic	**8.10**	0-10	0-10	0-10	

TABLE 1.2 ;

Sl No	Test Conducted	Sample	Results	**Requirements** as Per IS. Specification IS :383-1970 (Reaffirmed 2002)
1	Bulking of Sand	001	**15.94 %**	-----
2	Silt Content	----	**0.66 %**	Not more than 8%
3	Specific Gravity	----	**2.61**	-------

For Newzen Consultants Bangalore
Proprietor

Asst. Executive Engineer
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NC/QC/PD/2018-19/WF-CA1 Date: 11-04-2018

1. TESTING OF COARSE AGGREGATES (20 mm):

Sub: Testing of Construction Materials.
{Project*: Development Of Water Fountain Civil Works At Proposed Mallasandra Park in Mallasandra Ward No.13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Project Division, Dasarahalli Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Technical Manager, KRIDL.

Table - 1.1 : SIEVE ANALYSIS :

IS Sieve Size, mm	Percentage passing	Requirements as per IS 383-1970 (Reaffirmed on 2002) % Passing	
	20 mm Sample	Single size	Graded
40 mm	100.00	100.00	100.00
20 mm	95.85	85-100	90 - 100
10 mm	52.60	0 - 20	25 - 55
4.75 mm	3.75	0 - 5	0 - 10

TABLE 1.2 :

SL No	Test conducted	Results	Requirements as per IS:383-1970 & Tests Conforms to IS 2386(Part I to IV) – 1963 (Reaffirmed on 2002)
1.	Flakiness Index	24.95 %	Not to exceed 25 %
2.	Crushing value	26.05 %	Not to exceed 45 % for concrete other than for wearing surfaces and 30% for concrete for wearing surfaces

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For Newzen Consultants Bangalore
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NC/QC/PD/2018-19/WF-S1 Date: 11-04-2018

1. TEST REPORT ON REINFORCEMENT STEEL:

Sub: Testing of Reinforcement Steel of diameter 10, 12 & 16 mm **TMT Steel.**
{Project*: Development Of Water Fountain Civil Works At Proposed Mallasandra Park in Mallasandra Ward No.13 Shettyhalli Sub Division.}

Ref.: Material testing/QC/18-19,

Report Required for: Assistant Executive Engineer,
Project Division, Dasarahalli Zone,
BBMP, Bangalore.

Name of the Agency/Contractor*: Technical Manager, KRIDL.

TABLE – 1

SL No	Details	For 8 mm		For 10 mm	
		Test Results	Min Req. as per IS 1786-2008	**Test Results**	Min Req. as per IS 1786-2008
01	Observed diameter of bar	**8.0 mm**	8.0 mm	**10.0 mm**	10.0 mm
02	Observed Wt/m Length **Kg/m**			**0.618**	0.567
03	Proof stress/Yield stress, fy , **N/mm^2**	**543.0**	500.0	**547.0**	500.0
04	Bend/ Re bend Test	**Ok**	---	**Ok**	---
05	Percentage of Elongation, %	**21.10**	12.00	**21.70**	12.00
06	Ultimate Tensile Strength **N/mm^2**	**648.0**	545.0	**652.0**	545.0

Asst. Executive Engineer
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Date: 11-04-2018

TABLE – 2

SL No	Details	For 12 mm	
		Test Results	Min Req. as per IS 1786-2008
01	Observed diameter of bar	**12.0 mm**	12.0 mm
02	Observed Wt/m Length **Kg/m**	**0.892**	0.834
03	Proof stress/Yield stress, fy , **N/mm^2**	**543.0**	500.0
04	Bend/ Re bend Test	**Ok**	---
05	Percentage of Elongation, %	**21.90**	12.00
06	Ultimate Tensile Strength **N/mm^2**	**657.0**	545.0

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NC/QC/PD/2018-19/WF-SSM1

Date: 16-04-2018

1. TESTING OF STONE SAMPLE :

Sub: Testing of Size stone.
{Project*: Development Of Water Fountain Civil Works At Proposed Mallasandra Park in Mallasandra Ward No.13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Project Division, Dasarahalli Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Technical Manager, KRIDL.
Technical Reference: IS 1121(Part 1) -1974 (R.A on 1998)

Table 1.1 :

SL No	Details of Tests	Observed Value	Normal Values
01	Compressive Strength	**1353.00** Kg/ Sqcm	Not less than 1000.00 Kg/Sqcm
02	Water absorption,%	**0.38 %**	Not more than 2.0 %

Asst. Executive Engineer
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NC/QC/PD/2018-19/WF-SSM2 Date: 20-04-2018

1. TESTING OF STONE SAMPLE :

Sub: Testing of Size stone.
{Project*: Development Of Water Fountain Civil Works At Proposed Mallasandra Park in Mallasandra Ward No.13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Project Division, Dasarahalli Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Technical Manager, KRIDL.
Technical Reference: IS 1121(Part 1) -1974 (R.A on 1998)

Table 1.1 :

SL No	Details of Tests	Observed Value	Normal Values
01	Compressive Strength	**1328.00** Kg/ Sqcm	Not less than 1000.00 Kg/Sqcm
02	Water absorption,%	**0.40 %**	Not more than 2.0 %

Asst. Executive Engineer
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NC/QC/PD/2018-19/WF-CB1

Date: 02-05-2018

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{Project*: Development Of Water Fountain Civil Works At Proposed Mallasandra Park in Mallasandra Ward No.13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Project Division, Dasarahalli Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Technical Manager, KRIDL.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{25}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	24-04-18	02-05-18	08	22500	480	21.33	**20.81**
	002	"	"	"	"	465	20.67	
	003	"	"	"	"	460	20.44	

Asst. Executive Engineer
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NC/QC/PD/2018-19/WF-CB2 Date: 03-05-2018

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{Project*: Development Of Water Fountain Civil Works At Proposed Mallasandra Park in Mallasandra Ward No.13 Shettyhalli Sub Division.}
Ref.: Material testing/QC/18-19,
Report Required for: Assistant Executive Engineer,
Project Division, Dasarahalli Zone,
BBMP, Bangalore.
Name of the Agency/Contractor*: Technical Manager, KRIDL.

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{25}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	26-04-18	03-05-18	07	22500	450	20.00	**20.37**
	002	"	"	"	"	470	20.89	
	003	"	"	"	"	455	20.22	

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